

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,399	05/25/2001	Ronen Ingbir	2416/2	1188

7590 11/03/2004

DR. MARK FRIEDMAN LTD  
C/O BILL POLKINGHORN-DISCOVERY DISPATCH  
9003 FLORIN WAY  
UPP MARLBORO, MD 20772

EXAMINER

PHU, SANH D

ART UNIT	PAPER NUMBER
----------	--------------

2682

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/864,399

Applicant(s)

INGBIR, RONEN

Examiner

Sanh D Phu

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This Office Action is responsive to the amendment filed on 8/5/2004.
2. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

***Claim Rejections – 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claim 24 is rejected under 35 U.S.C. 102(a) as being anticipated by Sasaki et al (6,807,281), newly cited.

As per claim 24, see Fig. 1 and 6, col. 7, line 65 to col. 9, line 55, Sasaki et al disclose that a conversion device which converts an audible acoustic signal to an ultrasonic acoustic output, the conversion device comprising:

a microphone (audio source, 2) which receives as input the audible acoustic signal and thereby converts the audible acoustic signal to an electrical signal at a microphone electrical output port (see Fig. 6);

an electrical amplifier (21) with input port connected to said microphone electrical output port (see Fig. 6);

an oscillator (1a, 1b) which generates an oscillator output signal at ultrasonic frequency (see Fig. 6); and

a mixer (24) with mixes said electrical signal from said microphone (23a, 23b) and said oscillator output signal (1a, 1b) and thereby produces a mixed electrical output at ultrasonic frequency (see Fig. 6).

***Claim Rejections – 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2682

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 18-23, 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ingbir et al (6,377,824) in view of Sasaki et al (6,807,281).

As per claim 18 and 22, see Fig. 1, 4 and 5, Ingbir et al disclose a system for reducing radiation exposure to a user of a cellular telephone, the system comprising:

a conversion device (14) which converts an output electrical signal from the cellular telephone into an acoustic signal transmitted through air in a tube (see Fig. 5, lines 27-36); and

a second conversion device (7) which receives through air in said tube said acoustic signal and thereby converts said acoustic signal to an input electrical signal (see Fig. 5, lines 27-36);

wherein input electrical signal, said acoustic signal and said input electrical signal are each modulated which an audible signal for listening by the user (see Fig. 5, lines 27-36).

Ingbir et al does not disclose ultrasonic acoustic signal transmitted and received in open air.

However, Sasaki et al disclose an apparatus relates to an audio signal transmitter comprising an ultrasonic generating device (5) that transmits and receives an ultrasonic waves in open-air (see Fig. 6 and 8, col. 5, lines 1-40 and col. 11, line 44 to col. 12, line 3).

Therefore, at the time of the invention was made, it would have been obvious for one skilled in the art to implement the two conversion devices to ultrasonic acoustic system, as taught by Sasaki et al, so that the system transmit the signal longer and less expensive.

As per claim 19, Ingbir et al disclose the system further comprising:  
an audio transducer mechanism, operatively connected to said second conversion device (7), said audio transducer mechanism receiving said input electrical signal and demodulating said audible signal from said input electrical signal (see Fig. 4).

As per claim 20, Ingbir et al disclose the system wherein said audio transducer mechanism includes an audio transducer selected from the group consisting of earphones and loudspeakers (see Fig. 11, 12, 13 and 15).

As per claim 21, see Fig. 1, 4 and 5, Ingbir et al disclose the system further comprising:

a microphone (2) which converts an input audible acoustic signal to a second output electrical signal;

a third conversion device (16), operatively connected to said microphone, said third conversion device converting said second output electrical signal to a second acoustic signal (see Fig. 5);

a fourth conversion (7) device operatively' connected to the cellular telephone thereby converting said second acoustic signal to an electrical signal input to the cellular telephone (see Fig. 5).

wherein said input audible acoustic signal, said second output electrical signal and said second ultrasonic acoustic signal are each modulated with an audible signal from the user (see Fig. 5).



Ingbir et al does not disclose said fourth conversion device receiving from open-air said acoustic signal.

However, Sasaki et al disclose an apparatus relates to an audio signal transmitter comprising an ultrasonic generating device (5) that transmits and receives an ultrasonic waves in open-air (see Fig. 6 and 8, col. 5, lines 1-40 and col. 11, line 44 to col. 12, line 3)

Therefore, at the time of the invention was made, it would have been obvious for one skilled in the art to implement the two conversion devices to ultrasonic acoustic system, as taught by Sasaki et al, so that the system transmit the signal longer and less expensive.

As per claim 23, see Fig. 1 and 6, col. 7, line 64 to col. 9 line 55, Sasaki et al disclose the system wherein said conversion device converts said output electrical signal within the cellular telephone (2)(audio signal source) into said ultrasonic acoustic signal transmitted through air in open air, the conversion device including:

an oscillator (1a, 1b) with an oscillator output signal at ultrasonic frequency (see Fig. 6);

a combiner (3a,3b) which combines said oscillator output signal with said output electrical signal into a combined output (see Fig. 6);

an amplifier (27) with an input port which inputs said combined output, said amplifier amplifying said combined output at ultrasonic frequency and thereby outputting an amplified ultrasonic electrical signal (see Fig. 6); and

an ultrasonic speaker (5) which inputs said ultrasonic electrical signal and outputs the ultrasonic acoustic signal transmitted through air in open air (see Fig. 6).

As per claim 25, Ingbir et al disclose a method for reducing radiation exposure to a user of a cellular telephone, the cellular telephone equipped with an electrical coupler which outputs an output electrical signal modulated with a received-audible signal for listening by the user and the electrical coupler further inputs an input electrical signal modulated with a transmitted-audible signal from the user, the method comprising the steps of:

converting the output electrical signal into an acoustic signal(see Fig. 5, lines 27-36);

receiving said acoustic signal thereby converting said ultrasonic acoustic signal to a second input electrical signal (see Fig. 5, lines 27-36); and demodulating the received-audible signal from said second input electrical signal (see Fig. 5, lines 27-36).

Ingbir et al does not disclose ultrasonic acoustic signal transmitted and received in open air.

However, Sasaki et al disclose an apparatus relates to an audio signal transmitter comprising an ultrasonic generating device (5) that transmits and receives an ultrasonic waves in open-air (see Fig. 6 and 8, col. 5, lines 1-40 and col. 11, line 44 to col. 12, line 3)

Therefore, at the time of the invention was made, it would have been obvious for one skilled in the art to implement the two conversion devices to ultrasonic acoustic system, as taught by Sasaki et al, so that the system transmit the signal longer and less expensive.

As per claim 26, Ingbir et al disclose the method further comprising the steps of:

converting an input audible acoustic signal to a second output electrical

signal (see Fig. 4, col. 4, lines 12–26);

converting said second output electrical signal to a second acoustic signal (see Fig. 4, col. 4, lines 12–26); and

receiving said second acoustic signal and thereby converting said second acoustic signal to the input electrical signal input (see Fig. 4, col. 4, lines 12–26).

Ingbir et al does not disclose ultrasonic acoustic signal transmitted and received in open air.

However, Sasaki et al disclose an apparatus relates to an audio signal transmitter comprising an ultrasonic generating device (5) that transmits and receives an ultrasonic waves in open-air (see Fig. 6 and 8, col. 5, lines 1–40 and col. 11, line 44 to col. 12, line 3).

Therefore, at the time of the invention was made, it would have been obvious for one skilled in the art to implement the two conversion devices to ultrasonic acoustic system, as taught by Sasaki et al, so that the system transmit the signal longer and less expensive.

As per claim 27, see Fig. 4, Ingbir et al disclose a system for reducing radiation exposure to a user of a cellular telephone, the system comprising:

a microphone (12) which converts an input audible acoustic signal to an output electrical signal (see Fig. 4, col. 4, lines 12–26);

a conversion device (7), operatively connected to said microphone, said conversion device converting said output electrical signal to an acoustic signal (see Fig. 4, col. 4, lines 12–26); and

a second conversion device (14) operatively connected to the cellular telephone, said second fourth conversion device receiving said acoustic signal and thereby converting said acoustic signal to an electrical signal input to the cellular telephone.

Ingbir et al does not disclose ultrasonic acoustic signal transmitted and received in open air.

However, Sasaki et al disclose an apparatus relates to an audio signal transmitter comprising an ultrasonic generating device (5) that transmits and receives an ultrasonic waves in open-air (see Fig. 6 and 8, col. 5, lines 1–40 and col. 11, line 44 to col. 12, line 3).

Therefore, at the time of the invention was made, it would have been obvious for one skilled in the art to implement the two conversion devices to ultrasonic acoustic system, as taught by Sasaki et al, so that the system transmit the signal longer and less expensive.

### ***Response to Arguments***

7. Applicant's argument filed on 8/2/2004 render moot. However, claims 18-27 are deemed that be still rejected with reasons set forth above in this office action.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on

Art Unit: 2682

the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanh D Phu whose telephone number is (703) 305-8635. The examiner can normally be reached on 8:00-16:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 703-301-6739. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-8635.

Sanh D. Phu  
Examiner  
Art Unit 2682

Art Unit: 2682

SP

  
LEE NGUYEN  
PRIMARY EXAMINER